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**DESCRIPTION**

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ALLOY COATING FOR DIFFUSION BARRIER, METHOD FOR FORMING  
SAME, AND HIGH TEMPERATURE DEVICE MEMBER

**Technical field**

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The present invention relates to a diffusion  
barrier alloy film for use as a surface film (coating film)  
for extending the service life of a high-temperature  
apparatus member, which is used at a high temperature, such  
as a gas turbine blade, a jet engine turbine blade, a  
combustor, a nozzle, a boiler heat transfer pipe, a waste  
disposal apparatus, a semiconductor fabrication discharge  
gas treating apparatus, or the like, a method of  
manufacturing such an alloy film, and a high-temperature  
apparatus member incorporating such an alloy film.

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**Background Art**

High-temperature apparatus members, such as  
industrial gas turbine blades, jet engines, or the like, for  
example, are subject to a fluid temperature in excess of  
1300°C. Those members, which are made of a metal material,  
are susceptible to damage due primarily to high-temperature  
oxidation. For the purpose of making the members resistant  
to heat, it has heretofore been the general practice to